

**ABSTRACT**

Disclosed is a developmental animal model of temporal lobe epilepsy and other seizure-related disorders. In particular, the invention provides a method of inducing a permanent change in the neurological development of a rodent, such as a rat, comprising daily administration of low doses of a kainate receptor agonist to the animal in the second postnatal week, wherein after treatment with the kainate receptor agonist the animal exhibits reproducible seizure-like symptoms when exposed to mild to moderate stressors. Rats treated using the above method are particularly useful as a non-human system for studying temporal lobe epilepsy, as well as for studying the efficacy of potential anti-epileptic compounds and pharmaceutical preparations.